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10/663,908	09/17/2003	Juha T. Harju	59864.01093	2638

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EXAMINER	
WENDELL, ANDREW	

ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 10/663,908	**Applicant(s)** HARJU ET AL.	
	Examiner Andrew Wendell	**Art Unit** 2618	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 February 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: 1-18.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attachment.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

Andrew Wendell
571-272-0557

NAY MAUNG
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 17-19, 27, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (US Pat# 5,862,460).

Regarding claim 17, Rich's power control transmitter teaches a method for adjusting transmission parameters for digital broadcast signals emitted by a transmitter, comprising receiving, by a plurality of receiving apparatuses 104 (Fig. 1), the digital broadcast signals emitted by the transmitter (Col. 2 lines 57-62), transferring data from the plurality of receiving apparatuses to the transmitter via a return channel 150 or 151 (Fig. 1) that is independent of the broadcast channel, the transferred data including at least a portion of one of the received broadcast signals, reception parameters, and broadcast channel parameters (Col. 4 lines 4-29); and adjusting, by the transmitter, the transmission parameters as a function of the transferred data from the plurality of receiving apparatuses (Col. 4 lines 4-29). Rich fails to teach transmitting at frequencies below 30MHz.

Rich teaches the invention capable of using CDMA using the IS-95 Standard. Even though Rich does not specially say that it transmits below 30 MHz, it is know that CDMA operates at 1.25 MHz. The examiner takes an official notice to this effect.

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate CDMA transmission to accommodate more users at one time with less bandwidth and have a more efficient system.

Regarding claim 18, Rich teaches wherein at least a portion of the received digital broadcast signals is transferred from the plurality of receiving apparatuses to the transmitter to adjust the transmission parameters, and the transmitter ascertains the reception parameters and the broadcast channel parameters from the at least a portion of the received digital broadcast signals transferred to the transmitter (Col. 4 lines 4-29).

Regarding claim 19, Rich teaches wherein the plurality of receiving apparatuses evaluate the reception parameters and the broadcast channel parameters using the at least a portion of the received digital broadcast signals, and wherein the transmitter uses the reception parameters and the broadcast channel parameters to adjust the transmission parameters (Col. 4 lines 4-29).

Regarding claim 27, Rich teaches wherein at least one of the channel parameters and the reception parameters is evaluated at specific points in time (Col. 4 lines 4-12).

Regarding claim 29, Rich teaches wherein the transmitter is operated in a common-frequency network (Col. 1 lines 6-10 and Col. 2 lines 50-62), and the at least on receiving apparatus is connected to a main station of the common-frequency network (Figure 1).

Regarding claim 30, Rich's power control transmitter teaches a system for adjusting transmission parameters for digital broadcast signals transmitted over a broadcast channel, comprising a transmitter 102 (Fig. 1) including a data source 108 (Fig.1), a source coder 110 (Fig. 1), a modulator 110 (Fig. 1), a transmission amplifier 170 (Fig. 1), an antenna 106 (Fig. 1) for transmitting the digital broadcast signals, and a processor 130 (Fig. 1) for ascertaining the transmission parameters; and a plurality of receiving apparatuses 104 (Fig. 1), for receiving the digital broadcast signals emitted by the transmitter (Col. 2 lines 57-62), and for transferring data to the transmitter via a return channel 150 or 151 (Fig. 1) that is independent of the broadcast channel, the transferred data including at least a portion of one of the received broadcast signals, reception parameters, and broadcast channel parameters (Col. 4 lines 4-29); wherein the transmitter adjusts the transmission parameters as a function of the transferred data from the plurality of receiving apparatuses (Col. 4 lines 4-29). Rich fails to teach transmitting at frequencies below 30MHz.

Rich teaches the invention capable of using CDMA using the IS-95 Standard. Even though Rich does not specially say that it transmits below 30 MHz, it is know that CDMA operates at 1.25 MHz. The examiner takes an official notice to this effect. Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate CDMA transmission to accommodate more users at one time with less bandwidth and have a more efficient system.

3. Claims 20-22, 24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (US Pat# 5,862,460) in view of Willenegger (US Appl.# 2002/0009061).

Regarding claim 20, Rich teaches about adjustment of the transmission parameters. Rich fails to teach about signal-to-noise separation adjustment made to the transmission parameters.

Willenegger's method for controlling transmitted power of multiple channels teaches determining signal-to-noise separation for the adjustment of the transmission parameters (Section 0046).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate signal-to-noise separation adjustment made to the transmission parameters as taught by Willenegger into Rich's transmission control device in order to increase the quality of transmission signals to allow error free communication.

Regarding claim 21, Willenegger teaches determining, by the plurality of receiving apparatuses, at least one of a bit error rate of the received digital broadcast signals and a number of erroneous checksum tests 274 from the reception parameters (Fig. 2B).

Regarding claim 22, Rich teaches wherein the adjustment of the transmission parameters includes adjustment a transmitted power level (Col. 4 lines 4-12).

Regarding claim 24, Willenegger teaches if the digital broadcast signals are transferred in a packet mode, adjusting a packet repetition rate as one the transmission parameters (Section 0087).

Regarding claim 26, Willeneger teaches comparing at least one of the channel parameters and the reception parameters to at least one threshold value; and transferring the data via the return channel only if the at least one threshold value is one of exceeded and undershot (Section 0046).

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (US Pat# 5,862,460) in view of Willenegger (US Appl.# 2002/0009061) in view of Beshai (US Pat# 6,580,721).

Regarding claim 23, Rich teaches about power control of a transmitter. Rich fails to teach about services having a priority.

Willenegger teaches about controlling transmit power in a CDMA communication system.

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate power adjustments made to the transmission parameters as taught by Willenegger into Rich's transmission control device in order to increase the quality of transmission signals to allow error free communication.

Both Willenegger and Rich fail to teach about services having a priority.

Beshai's routing and rate control system teaches the transfer rate can be distributed over a plurality of services, assigning at least one of the transfer rate and the

source data rate to the plurality of services as a function of their priority (Col. 20 lines 41-63, Col. 22 lines 40-67, Col. 30 lines 10-30, and Col. 34-47).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate services having a priority as taught by Beshai into power adjustments made to the transmission parameters as taught by Willenegger into Rich's transmission control device in order to increase the quality of transmission signals to allow error free communication.

5. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (US Pat# 5,862,460) in view of Willenegger (US Appl.# 2002/0009061) in view of Sakoda (US Pat# 6,230,022).

Regarding claim 25, Rich teaches about power control of a transmitter using CDMA. Rich fails to teach about controlling signals in OFDM.

Willenegger teaches about controlling transmit power in a CDMA communication system.

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate power adjustments made to the transmission parameters as taught by Willenegger into Rich's transmission control device in order to increase the quality of transmission signals to allow error free communication.

Both Willenegger and Rich fail to teach about controlling signals in OFDM.

Sakoda et al. method of sending power control teaches the digital broadcast signals are transferred in an orthogonal frequency multiplex mode, adjusting at least of

a carrier frequency spacing and a length of a protective interval as one of the transmission parameters (Fig. 3, Col. 6 line 56-Col. 7 line 37).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate controlling signals in OFDM as taught by Sakoda et al. into power adjustments made to the transmission parameters as taught by Willenegger into Rich's transmission control device in order to increase the quality of transmission signals to allow error free communication.

6. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (US Pat# 5,862,460) in view of Kleider et al. (US Pat# 6,084,919).

Regarding claim 28, Rich teaches about a return channel 150 or 151 (Fig. 1). Rich fails to teach about the return channel operating in duplex mode.

Kleider et al. communication unit using spectral adaptability teaches wherein the return channel is operated in a duplex mode (Col. 3 lines 16-19).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a return channel operating in duplex mode as taught by Kleider et al. into Rich's return channel in order to increase the quality of transmission signals to allow error free communication.

7. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (US Pat# 5,862,460) in view of Tiedemann, Jr. et al. (US Pat# 6,876,867).

Regarding claim 31, Rich teaches a return channel 150 or 151 (Fig. 1). Rich fails to teach about a first communication device.

Tiedemann, Jr. et al. power control transmit system teaches wherein the transmitter further includes a first communication device 54 (Fig. 2) for communicating via the return channel.

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a first communication device as taught by Tiedemann, Jr. et al. into Rich's return channel in order to increase the quality of transmission signals to allow error free communication.

Regarding claim 32, Tiedemann, Jr. et al. teaches wherein each receiving apparatus further includes a second communication device 42 (Fig. 2) for communicating via the return channel.

8. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (US Pat# 5,862,460) in view of van Nee (US Pat# 6,175,550).

Regarding claim 33, Rich's power control transmitter teaches the limitations in claim 17. Rich fails to teach a transmitter transmitting OFDM signals.

Van Nee orthogonal frequency division multiplexing system with dynamically scalable operating parameters and method thereof teaches wherein the transmitter transmits OFDM signals (Fig. 1).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a transmitter transmitting OFDM signals as taught by van Nee into Rich's power control transmitter in

order to increased flexibility and adaptability by providing scaling of operating parameters (Col. 1 lines 38-41).

Regarding claim 34, the combination including van Nee teaches wherein the transmitter transmits OFDM signals (Fig. 1).

Response to Arguments

Applicant's Remarks	Examiner's Response
"Specifically, Dean does not teach or suggest generating a network survey of timing difference from various locations."	Ogino teaches a network survey of timing difference from various locations (Fig. 4, Sections 0008-0009 and 0039-0045). Also, for the sake of argument, Dean teaches timing differences from various locations. In Col. 6 lines 30-33, it says "A timing analyzer 90 preferably may move readily throughout the coverage area of a system. For example, the timing analyzer 90 may be installed in a van." This means a timing device 90 (Fig. 2) can survey timing differences from various locations (driving in a van around coverage areas using the timing device).
"Neither Ogino nor Dean raise the issue of calculating a network survey which can be	Examiner believes applicant is reading more into the claims than present.

used for calibrating the network."	Examiner fails to see where in the claims it states "calibrating the network."
"Applicants also submit that one skilled in the art would not be motivated to modify the teaching of Ogino and Dean to yield the elements recited in the presently pending claims."	Again, Ogino and Dean both teach analyzing timing from signals sent by a base station(s) in a wireless network environment.
"However, neither Dean nor Ogino teach or suggest generating a network survey of timing difference from various locations by locating the network survey device to a first location and measuring synchronization of a first base station relative to a reference time-frame determined from a location system and moving the network survey device to a second location and measuring synchronization of a first base station relative to a reference time-frame, as recited in the pending claims."	Ogino clearly teaches generating a network survey of different locations. The base station is part of a communication network and the network survey device collects signals from the base station at different locations (Sections 0041-0042). It uses the timing signals to reference with other timing signals (Sections 0043-0044).
The timeing offsets gather in Dean is not equivalent to a network survey of timing	Again, Ogino teaches a network survey of timing difference from various locations

difference, as recited in the pending claims."	(Fig. 4, Sections 0008-0009 and 0039-0045). Also, for the sake of argument, Dean teaches timing differences from various locations. In Col. 6 lines 30-33, it says "A timing analyzer 90 preferably may move readily throughout the coverage area of a system. For example, the timing analyzer 90 may be installed in a van." This means a timing device 90 (Fig. 2) can survey timing differences from various locations (driving in a van around coverage areas).
"There is no evidence, in Dean, that the GPS receiver is needed to determine the position of the device for performing the proposed measurement."	As applicant states, "the GPS receiver can be used for two purposes, for positioning." Later the applicant states, "In Dean, the navigation mode is only needed initially." As stated, the GPS is and can be used to determine position.